

NC ACCESSIBILITY CODE

2009 NC Bldg Code Ch. 11

2003 ICC/ANSI A117.1

Effective date: 1 Jan 2010

2010 ADA STANDARDS:

- Published in Federal Register 9/15/10
- Effective 3/15/11
- Mandatory 3/15/12
- Copy available: www.ada.gov

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ANSI 504.5 2" Marking on Stair Treads

Sometimes reading ANSI is like opening the Reader's Digest version of "where did this come from?" Little things pop up that you never saw before with no change bar in the margin. How did that happen? Well, gang, it's because ANSI was out there before we were using it, so the language is not new to ANSI, just new to us.

ANSI 504.5 has a very interesting piece of language that is tucked at the end of the charging paragraph and is easy to miss or over look.

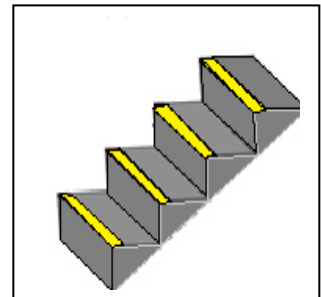
Here it is:

The leading 2 inches of the tread shall have visual contrast of dark-on-light or light-on-dark from the remainder of the tread.

The ANSI Commentary clarifies that this is intended to identify the forward edge of each and every tread so that they will be less of a tripping hazard for someone with a visual impairment.

Think of how a change from a level walking surface to steps can affect

someone, particularly when the surface may not be well illuminated. The marking on the stair treads will make such a difference. Have you been putting this in stairs that you have designed or reviewed? You should have.



New 2012 NC State Building Codes

In September this year, North Carolina will move to the 2012 edition of the state building codes. Usually this occurs on January 1st, but in a move to get an early start, the NC Building Code Council opted to move forward as follows:

Adopted codes/standards: 2012 NC Building Codes (based on the 2009 IBC)

- Building, Plumbing, Mechanical, Fuel Gas, and Fire
- 2009 ANSI A117.1 [**note** that this is different than the 2009 IBC reference]

Effective Date: September 1, 2011

Transition Period: 6 months between 9/1/11 and 3/1/12

Mandatory Date: March 1, 2012

The effective/mandatory enforcement date of the **2011 Electrical Code** will be 9/1/2011.

2012 Energy and Residential Codes: Adoption of these codes has gone to the legislature for review since 10 letters were received by the Rules Review Commission. If [HB 801](#) passes and there is a corresponding Senate Bill that passes by crossover date, these are the dates:

Effective: January 1, 2012 Mandatory: March 1, 2012



Enhanced Reach Ranges: 6 or More



**2012 NCBC 1109.2.3
ANSI 606.5**

2012 NCBC 1109.2.3 will require **enhanced reach ranges** in accordance with **ANSI 606.5** where the total number of lavatories provided in a room is six or more. So this is likely to impact multiple types of designs, including but not limited to:

1. Assembly projects
 - Churches, auditoriums, arenas, stadiums, locker rooms, museums
2. Educational
 - Schools, locker rooms,

The Enhance Reach Ranges are applicable to the controls and to the soap. Both are required to be within 11" from the front edge of the counter in which the lavatory is mounted.

Remember: this is already required for all Nursery, Day Care and K-3rd Grade lavatories due to the size of the children.

When Submitting Alteration Plans

**NCBC 3409.6
Alterations
+
NCBC 3409.7
Disproportionality**

The **2004 NC Accessibility Code** was very clear about what to do when a building was being altered. **NCAC 34.2.2.1** and **34.2.6.2** outlined a specific set of six steps to follow. It began from the parking lot and worked along the path of travel to the interior of the building to the area of remodel until not more than 20% of the budget, i.e., the disproportionate amount, was spent.

NCBC Ch. 34 has the same requirements, but because the details are missing and code sections have been rearranged, enforcement has no longer been as stringent as it (hopefully) used to be. [Judging from the accessibility-related number of complaints that the NC Qualification Board has received recently, this has become an issue.]

To begin with, the 2009 NC Building Code has a different sequence in proceeding:

1. **NCBC 3409.6** – Alterations: start here. You do have to comply first, unless it is technically infeasible. To be technically infeasible requires a signed, sealed letter from a structural engineer. Otherwise, comply to the maximum extent feasible.
2. **NCBC 3409.7 Exc. 1** – Disproportionality: this comes after the alterations have been completed. There are exceptions in calculating what comes out of the budget. (See NCBC 3409.7 Exc. 2, 3 and 4.)

The 2006 IBC Commentary tells you that the path of travel begins outside the building as it always does and "*The idea is that existing buildings would become fully accessible over time.*"

When submitting alteration plans:

1. A jurisdiction should always verify that the path of travel from the parking lot into the building to the primary function area being altered is accessible.
2. It is never acceptable to assume that it is accessible.
3. An architect shall indicate on plans being submitted that the path of travel to the area of remodel is accessible. If you detail how the path is accessible. Then you will have a record in the event that a complaint is filed.

Ext. Doors: Opening Pressures + Automatic Doors

Two questions that have been asked a lot lately are:

**Q1: What is the opening pressure for an exterior door?
Where would I find this in the NCBC or in ANSI?**

A1: The **2004 NCAC 7.6.2** had an opening pressure requirement of 8.5 lbs for an exterior door. This was a NC requirement with no corresponding ADA or ICC requirement. So when the code changed year editions, the opening pressure requirement slipped away, along with other requirements. There is no requirement in the 2009 or 2012 NCBC, in ANSI or in the 2012 ADA for exterior door opening pressure.

✓ **If you want to check whether or not something made it through from the 2004 NCAC code or not,** one quick check is to look in the margin. If the margin has a Vol. I-C reference only and not ADA, then it did not make the transfer.

Q2: Are automatic doors required in the code and if so, where is the requirement located?

A2: No, there is no requirement, though many think that there is. Automatic doors are required/provided under the following situations:

1. Typically, alterations where the clear floor area at the pull side of the door cannot be provided.
2. To assist with opening heavy or over-sized doors.
3. Commercial occupancies for the benefit of the public:
 - a. Target, Wal-Mart, movie theaters
 - b. Public buildings, city halls, assembly occupancies
 - c. Hospitals, to avoid hand contact with door hardware + ease patient transition

✓ This is a particular complaint among persons with disabilities. I have received many calls over the years from people who think that automatic doors are required by the ADA when it came out years ago.

Detectable Warnings:

If you've wanted a summary of where they are required and where they are not required, here is a short discussion for you.

There have been many questions of late about detectable warnings. Especially since the requirement was **'SUSPENDED'** in the 2004 NCAC and never required for commercial projects under that code, only in the public right of way, with the exception of the edge of public transportation platforms. USDOJ thought at the time that the 2004 ADA/ABA (the document from which the 2010 ADA Standards came) might be adopted sooner that it was. But it wasn't. So we spent a much longer time without any idea what was going to occur regarding detectable warnings. This is what happened...

REQUIREMENTS EXTERIOR TO THE BUILDING:

[ANSI 705 – Detectable Warnings]

NOT REQUIRED

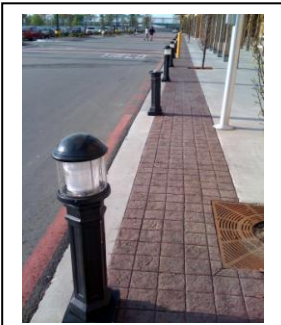
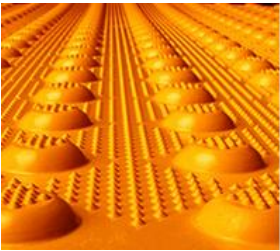
- 406.13 Detectable Warnings at Curb Ramps - not required, *technical requirements available if provided* [See ANSI 705]
- 406.14 Detectable Warnings at Islands or Cut-through Medians - not required, *technical requirements available if provided* [See ANSI 705]

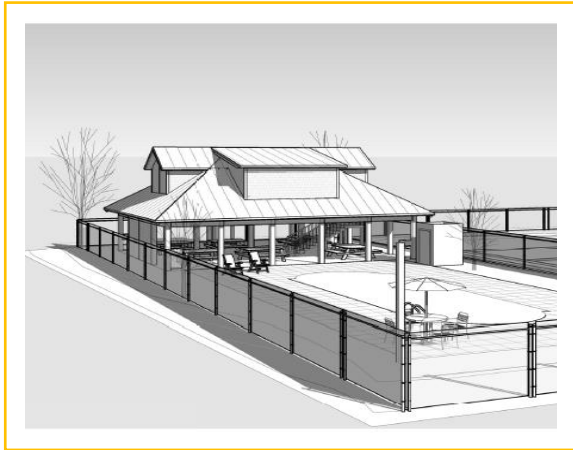
REQUIRED

- 406.12 Detectable Warnings at Raised Marked Crossings – raised to the same level as the adjoining sidewalk
- 805.5.2 (Rail Platforms) Detectable Warnings – Required where not protected by platform screens or guards

DESIGN OPTIONS

- Patterned concrete to identify the separation between the sidewalk and the vehicular way
- This may address potential liability concerns resulting from lack of treatment with nothing between the sidewalk and the vehicular way where there is no elevation change between the two
- **PLEASE NOTE** that where the marked crossing is raised to the same level as the adjoining sidewalk detectable warnings are required, however the code does not address where the sidewalk is lowered to the same level as the vehicular way, yet the same hazard exists.





NCPC 403.6 Toilet Rms

When you think about swimming pools and 2-story buildings, which typically do not require an elevator, it is easy to forget that the NC Plumbing Code requirements for toilet rooms permit plumbing fixtures to be located one story above grade.

For example, a project has the only toilet room on the 2nd floor in accordance with NCPC 403.6. An elevator, ramp or lift is not required to that level until the building is

3-stories and has a minimum of 3,000 sf on at least one story per NCBC 1104.4.8. However since there is a requirement for an accessible path of travel to the toilet rooms, one of the following solutions will apply:

1. Construct toilet rooms on the ground floor.
2. Install a ramp to the 2nd floor.
3. Install an elevator to the 2nd floor.

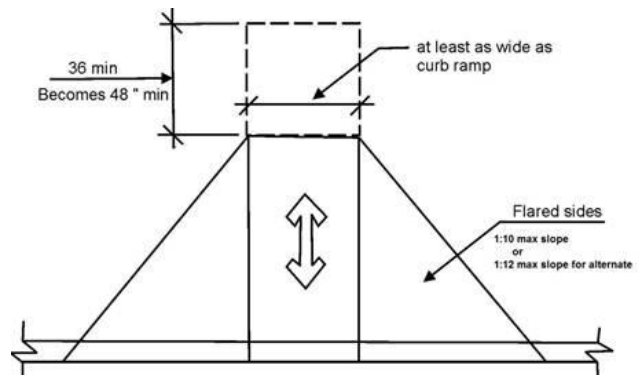
Planning sidewalks so that pedestrians do not have to travel across the side flares of a curb cut is a preferable way to design your circulation path. Part of doing this is to locate curb cuts and curb ramps where they will not extend into pedestrian cross-traffic. While this is preferable, as the ANSI Commentary notes, it is not always feasible to do, particularly where existing sites do not allow the space that is required.

ONE NOTE OF CAUTION HERE: the 36" minimum dimension at the top becomes 48". The **NCBC 1104.2** requirement for a 48" exterior path of travel will always override the ANSI 36" exterior width dimension.

ANSI 406.7 does provide a saving grace for alterations:

EXCEPTION: In alterations, where there is no landing at the top of curb ramps, curb ramp flares shall be provided and shall not be steeper than 1:12.

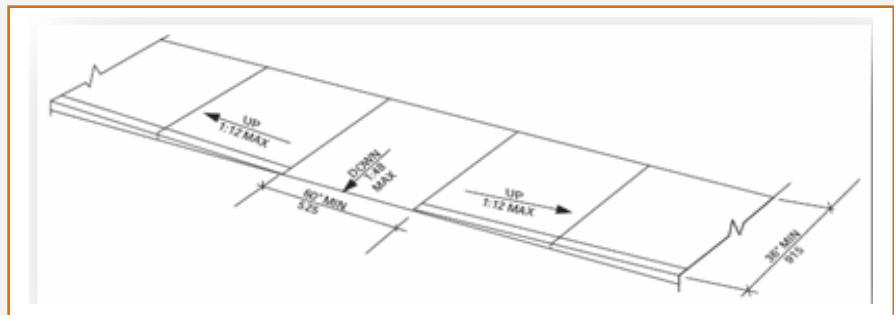
ANSI 406.3 Curb Ramps



ANSI Fig. C 406.7(a) Curb Ramp Option

2003 ANSI Commentary:

'If there is not enough space to allow for a flat perpendicular route... an alternative would be to lower a portion of the sidewalk to be level with the parking or road surface, with a straight curb at both ends.'



ANSI 505.10.3 Bottom Stair Handrail

For ten years or more, we were accustomed to extending the handrails at the bottom of stairs a distance of 'tread depth plus 12 inches'. This gave you something to grab onto when you slipped or just need a something to help direct your path of travel at the bottom of the stairs, especially when going around a corner.

ANSI 505.10.3 has modified the handrail extension two ways:

1. The extension is now for a horizontal distance equal to one tread depth beyond the bottom tread nosing, and
2. And the extension shall extend 'at the slope of the stair flight', meaning that it need not be parallel to the ground or floor surface.

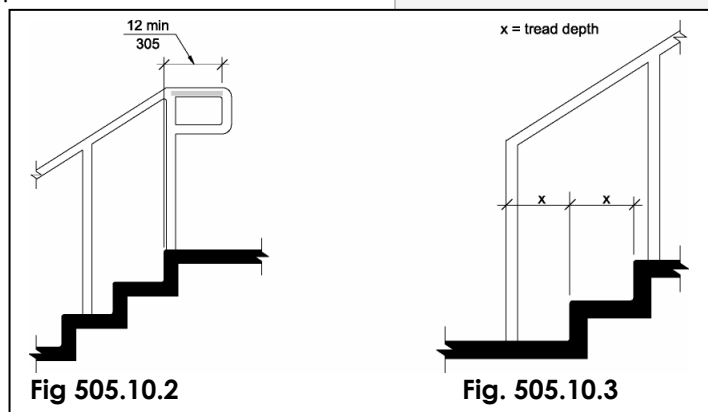
Fig. **505.10.2** at the right illustrates the top of the stairs.

Fig. **505.10.3** to the far right illustrates the bottom.

Handrails are still required to return to the wall, guard, ground or support.

- So that clothes will not catch on the end.
- The extension return must be detectable by cane users and still not become a protruding object for people crossing perpendicular to the top of the stair.

NCBC 1012 has coordinated language changes.



NOTE: While stair treads are typically 11", the handrail extension is required to be minimum 12" at the top.

2010 ADA Stds + Vertical Grab Bar

If you have been doing your home work, you may have noticed that the 2010 ADA Standards do not have a requirement for the vertical fixed side wall grab bar that is required in both **2003** and **2009 ANSI 604.5.1**.

There is no mention of it in either the 2010 ADA Standards or the 2010 ADA Guidance document. So where does that leave us?

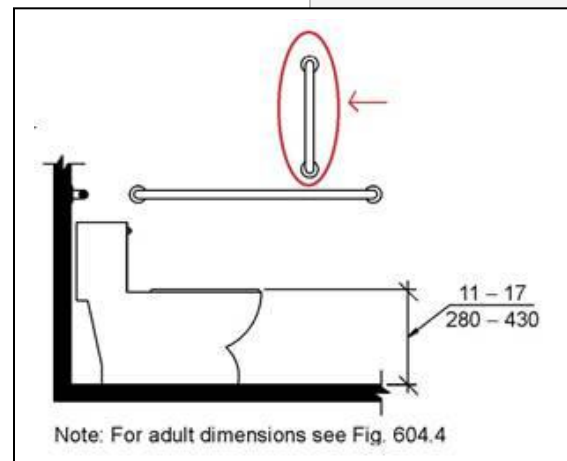
As you know, there was a gap between when the ANSI Committee finished its work on the 2009 Standard (final committee actions were made late spring of 2010) and when the USDOJ

completed its work (the 2010 adoption was announced in July 2010).

The 2009 ANSI A117.1 Standard had already gone to print by the time the 2010 ADA Standard was finally published for the first time in the Federal Register on September 15, 2010.

This means, until the 2009 ANSI Standards (referenced in the 2012 NCBC) have been revised or someone submits a code change to the NC Building Code Council that is approved; NC will continue to enforce the ANSI 604.5.1 requirement for the vertical side wall grab bar.

ANSI 604.5.1



NC Rehab Code

2009 NC Rehab Code will become 2012 NC Rehab Code

2012 NC Rehab Code + 2012 NCEC

Did we save the best for last?

With the talk of new codes on the front page, it is only fitting to close with a reminder that the **2009 NC Rehab Code** will be updated to reflect the most current year editions of the codes in effect. It will then become the **2012 NC Rehab Code** and will go into effect on September 1, 2011.

Also, in case you have been wondering about how the **NC Energy Code** (and its requirements) fits into the NC Rehab Code, this is the background: when the rehab code was originally written, the energy requirements were spread throughout all the codes.

Now the energy requirements have been pulled out into a separate

code book that is part of the NC State Building Code. So the energy requirements are included by reference.

The **2012 NC Rehab Code** will have a specific listing in the front that includes the **2012 NC Energy Code**, just as it does for the other referenced codes.

2-Way Comm. at Ext. Assisted Rescue

What we used to call Areas of Rescue Assistance in the 2004 NCAC has now become:

1. An area of refuge for an interior location [**NCBC 1007.3; 1007.6**] and
2. An area for assisted rescue for the exterior ones. [**NCBC 1007.8**]

One major distinction between the two is this:

- Only the areas of refuge require the **NCBC 1007.6.3** two-way communication systems between the areas of refuge and the central control point

Why? In discussions with both the USDOJ and the US Access Board, the thought is that you are 1) outside the building, and 2) the fire department will circle the building and will locate you on the exterior. The assumption is that there will always be a fire event that will alert the fire department. That may not be the case every time. There may be an issue in buildings that do not have automatic sprinklers or smoke detection systems to summon the fire department. The US Access Board is working to get 2-way added to exterior locations in future codes but it is not there now.

200' Parking Travel Distance

NCBC 1106.6 states that *Accessible parking spaces shall be located on the shortest accessible route of travel from adjacent parking to an accessible building entrance.*

For some reason, there have been a large number of people inquiring as to what the maximum travel distance to a parking space is.

Remember the 200 feet maximum travel distance in the 2004 NC Accessibility Code?

2004 NCAC App B

G. S. 20-37.5 (2) defines "Handicapped" as a person with a mobility impairment who, as determined by a licensed physician:

- a. Cannot walk 200 feet without stopping to rest.

The 200' maximum distance was a NC General Statute definition. There is no similar language. The only distance requirements are in **NCBC 1106.6** requiring parking spaces to be located on the shortest route from the accessible building entrance.

